



SEQUENCE LISTING

<110> Bertin, John

<120> NOVEL MOLECULES OF THE CARD-RELATED
PROTEIN FAMILY AND USES THEREOF

<130> 07334-142001

<140> 09/767,215

<141> 2001-01-22

<150> 60/181,159

<151> 2000-02-09

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<210> 1

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<212> DNA

<213> Homo sapiens

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His Arg His Arg Ile Val Arg Cys Ile Cys Pro Ser Arg Leu Thr Pro
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Tyr Leu Arg Gln Ala Lys Val Leu Cys Gln Leu Asp Glu Glu Glu Val
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Leu His Ser Pro Arg Leu Thr Asn Ser Ala Met Arg Ala Gly His Leu
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Leu Asp Leu Leu Lys Thr Arg Gly Lys Asn Gly Ala Ile Ala Phe Leu
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Leu Gln Pro Asp Val Asp Phe Ser Asn Phe Ser Gly Leu Met Glu Thr	
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tcc aag ctg acc gag tgc ctg gct ggg gcc atc ggc agc ctg cag gag	617
Ser Lys Leu Thr Glu Cys Leu Ala Gly Ala Ile Gly Ser Leu Gln Glu	
125 130 135	
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Glu Leu Asn Gln Glu Lys Gly Gln Lys Glu Val Leu Leu Arg Arg Cys	
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Gln Gln Leu Gln Glu His Leu Gly Leu Ala Glu Thr Arg Ala Glu Gly	
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ctg cac cag ctg gag gct gac cac agc cgc atg aag cgt gag gtt agc	761
Leu His Gln Leu Glu Ala Asp His Ser Arg Met Lys Arg Glu Val Ser	
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gca cac ttc cat gag gtg ctg agg ctg aag gac gag atg ctc agc ctc	809
Ala His Phe His Glu Val Leu Arg Leu Lys Asp Glu Met Leu Ser Leu	
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Ser Leu His Tyr Ser Asn Ala Leu Gln Glu Lys Glu Leu Ala Ala Ser	
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Arg Cys Arg Ser Leu Gln Glu Glu Leu Tyr Leu Leu Lys Gln Glu Leu	
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Gln Arg Ala Asn Met Val Ser Ser Cys Glu Leu Glu Leu Gln Glu Gln	
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tcc ctg agg aca gcc agc gac cag gag tcc ggg gat gag gag ctg aac	1001
Ser Leu Arg Thr Ala Ser Asp Gln Glu Ser Gly Asp Glu Glu Leu Asn	
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Arg Leu Lys Glu Glu Asn Glu Lys Leu Arg Ser Leu Thr Phe Ser Leu	
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Cys Leu Thr Leu Val Pro Tyr Thr Leu Val Trp Pro His Arg Pro Ala	
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cgg ccc cgg cct gtg ctc ctc gtg ccc agg gcg gtt ggg aag atc ctg	2729
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Leu Ala Pro Asp Gly Trp Ser Asp Leu Asp Gly Leu Leu Ser Cys Val	
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Ser Pro Arg

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Leu Cys Gln Leu Asp Glu Glu Glu Val Leu His Ser Pro Arg Leu Thr
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Gly Lys Asn Gly Ala Ile Ala Phe Leu Glu Ser Leu Lys Phe His Asn
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Pro Asp Val Tyr Thr Leu Val Thr Gly Leu Gln Pro Asp Val Asp Phe
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Gln Lys Glu Val Leu Leu Arg Arg Cys Gln Gln Leu Gln Glu His Leu
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His Ser Arg Met Lys Arg Glu Val Ser Ala His Phe His Glu Val Leu
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Arg Leu Lys Asp Glu Met Leu Ser Leu Ser Leu His Tyr Ser Asn Ala
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Leu Gln Glu Lys Glu Leu Ala Ser Arg Cys Arg Ser Leu Gln Glu
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225 230 235 240
Ser Cys Glu Leu Glu Leu Gln Glu Gln Ser Leu Arg Thr Ala Ser Asp
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Gln Glu Ser Gly Asp Glu Glu Leu Asn Arg Leu Lys Glu Glu Asn Glu
260 265 270

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 Glu Ala Arg Thr Arg Glu Pro Cys Pro Arg Glu Lys Gln Arg Leu Val
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 Arg Met His Ala Ile Cys Pro Arg Asp Asp Ser Asp Cys Ser Leu Val
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$\langle 210 \rangle$ 3

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Glu Thr Leu Trp Glu Met Met Glu Ser His Arg His Arg Ile Val Arg
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tgc atc tgc ccc agc cgc ctc acc ccc tac ctg cgc cag gcc aag gtg 144
Cys Ile Cys Pro Ser Arg Leu Thr Pro Tyr Leu Arg Gln Ala Lys Val

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Leu	Cys	Gln	Leu	Asp	Glu	Glu	Glu	Val	Leu	His	Ser	Pro	Arg	Leu	Thr			
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Asn	Ser	Ala	Met	Arg	Ala	Gly	His	Leu	Leu	Asp	Leu	Leu	Lys	Thr	Arg			
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Gly	Lys	Asn	Gly	Ala	Ile	Ala	Phe	Leu	Glu	Ser	Leu	Lys	Phe	His	Asn			
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His	Gln	Leu	Glu	Ala	Asp	His	Ser	Arg	Met	Lys	Arg	Glu	Val	Ser	Ala			
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Gln Glu Leu Val Glu Arg Ile His Ser Leu Arg Glu Arg Ala Val Ala	
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Thr Val His Val Ser His Ser Val Gln Tyr Trp Glu Glu Lys Glu Gln	
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Thr Leu Leu Gln Phe Gln Lys Ser Lys Met Ala Cys Gln Leu Tyr Arg	
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Leu His Val Thr Asp Thr Met Phe Gln Gly Cys Gly Cys Trp His Ala	
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His Arg Val Asn Ser Tyr Thr Met Lys Asp Thr Ala Ala His Gly Thr	
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Met Glu Lys Asn Thr His Ala Leu Leu Asp Val Gln Leu Asp Ser Val	

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Val Asn Glu Lys Met Ala Lys Lys Leu Lys Lys Gly Leu Gln Arg Leu	980	985	990	
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Gly Thr Ser Glu Glu Gln Leu Leu Glu Ala Ala Arg Gln Glu Glu Gly	995	1000	1005	
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Asp Leu Asp Arg Ala Pro Cys Leu Tyr Ser Ser Leu Ala Pro Asp Gly	1010	1015	1020	
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Trp Ser Asp Leu Asp Gly Leu Leu Ser Cys Val Arg Gln Ala Ile Ala	1025	1030	1035	1040
gac gag cag aag aag gtg caa cgc cga cgt cat cca aga att aac cca				3168
Asp Glu Gln Lys Lys Val Gln Arg Arg Arg His Pro Arg Ile Asn Pro	1045	1050	1055	
agc cag agg acg ggc atc gcc acc cag caa cgc cag tgt cac cga aga				3216
Ser Gln Arg Thr Gly Ile Ala Thr Gln Gln Arg Gln Cys His Arg Arg	1060	1065	1070	
att aac cca agg cag agg atg ggc att gcc acc cag caa cgc cag tgt				3264
Ile Asn Pro Arg Gln Arg Met Gly Ile Ala Thr Gln Gln Arg Gln Cys	1075	1080	1085	
cac cga aga att aac cca agc cag agg acg ggc atc acc acc cag caa				3312
His Arg Arg Ile Asn Pro Ser Gln Arg Thr Gly Ile Thr Thr Gln Gln	1090	1095	1100	
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Cys Gln Cys His Arg Arg Ile Asn Pro Ser Gln Arg Thr Gly Ile Ala	1105	1110	1115	1120
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 Lys Asn Gly Ala Ile Ala Phe Leu Glu Ser Leu Lys Phe His Asn Pro
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 Asp Val Tyr Thr Leu Val Thr Gly Leu Gln Pro Asp Val Asp Phe Ser
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 Gln Leu Glu Ala Asp His Ser Arg Met Lys Arg Glu Val Ser Ala His
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 Arg Ser Leu Gln Glu Glu Leu Tyr Leu Leu Lys Gln Glu Leu Gln Arg
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 Lys Asp Ile Leu Glu Gln Ser Leu Asp Glu Ala Arg Gly Ser Arg Gln
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 405 410 415
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 420 425 430
 Asp Gln Val Cys Glu Leu Arg Thr Gln Leu Arg Gln Leu Gln Ala Glu
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 Pro Pro Gly Val Leu Lys Gln Glu Ala Arg Thr Arg Glu Pro Cys Pro
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Ser Ser Pro Ala Pro	Pro Ser Gln Gln	Ser Leu Tyr Lys	Arg Val Ala			
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Pro Glu Gly Asp Pro	Gly Ala Leu Pro	Gly Ala Lys Ala	Gly Asp Pro			
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His Leu Asp Tyr Glu	Leu Leu Asp Thr	Ala Asp Leu Pro	Gln Leu Glu			
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Gly Ile Phe Ile His	Arg Val Thr Pro	Gly Ser Ala Ala	Asp Gln Met			
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Ala Leu Arg Pro Gly	Thr Gln Ile Val	Met Val Asp Tyr	Glu Ala Ser			
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Val Ala Thr Ser Gly	Asp Ser Phe Tyr	Ile Arg Val Asn	Leu Ala Met			
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Glu Gly Arg Ala Lys	Gly Glu Leu Gln	Val His Cys Asn	Glu Val Leu			
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His Val Thr Asp Thr	Met Phe Gln Gly	Cys Gly Cys Trp	His Ala His			
	755	760	765			
Arg Val Asn Ser Tyr	Thr Met Lys Asp	Thr Ala Ala His	Gly Thr Ile			
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Pro Asn Tyr Ser Arg	Ala Gln Gln Gln	Leu Ile Ala Leu	Ile Gln Asp			
	785	790	795			800
Met Thr Gln Gln Cys	Thr Val Thr Arg	Lys Pro Ser Ser	Gly Gly Pro			
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Gln Lys Leu Val Arg	Ile Val Ser Met	Asp Lys Ala Lys	Ala Ser Pro			
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Gly Ser Ser Thr Cys	Phe Trp Ala Glu	Ser Cys Leu Thr	Leu Val Pro			
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Tyr Thr Leu Val Arg	Pro His Arg Pro	Ala Arg Pro Arg	Pro Val Leu			
	865	870	875			880
Leu Val Pro Arg Ala	Val Gly Lys Ile	Leu Ser Glu Lys	Leu Cys Leu			
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Leu Gln Gly Phe Lys	Lys Cys Leu Ala	Glu Tyr Leu Ser	Gln Glu Glu			
	900	905	910			
Tyr Glu Ala Trp Ser	Gln Arg Gly Asp	Ile Ile Gln Glu	Gly Glu Val			
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Ser Gly Gly Arg Cys Trp Val Thr Arg His Ala Val Glu Ser Leu Met
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 965 970 975
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Glu Ile Thr Leu Glu Lys Glu Val Lys Arg Gly Gly Leu Gly Phe Ser
 1           5           10           15
Ile Lys Gly Gly Ser Asp Lys Gly Ile Val Val Ser Glu Val Leu Pro
      20           25           30
Gly Ser Gly Ala Ala Glu Ala Gly Arg Leu Lys Glu Gly Asp Val
      35           40           45
Ile Leu Ser Val Asn Gly Gln Asp Val Glu Asn Met Ser His Glu Arg
      50           55           60
Ala Val Leu Ala Ile Lys Gly Ser Gly Gly Glu Val Thr Leu Thr Val
      65           70           75           80
Leu Arg Asp

```

<210> 8

<211> 58

<212> PRT

<213> Artificial Sequence

<220>

<223> consensus sequence

<400> 8

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Glu Tyr Val Val Ala Leu Tyr Asp Tyr Glu Ala Gln Asn Glu Asp Glu
 1           5           10           15
Leu Ser Phe Lys Lys Gly Asp Ile Ile Thr Val Leu Glu Lys Ser Asp
      20           25           30
Asp Gly Trp Trp Glu Gly Glu Leu Asn Arg Thr Gly Lys Glu Gly Leu
      35           40           45
Phe Pro Ser Asn Tyr Val Glu Ile Glu
      50           55

```

<210> 9

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> consensus sequence

<400> 9

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Thr Arg Pro Val Pro Arg Pro Gly Glu Val Asp Gly Lys Asp Tyr His
 1           5           10           15
Phe Val Ser Ser Arg Glu Glu Met Glu Lys Asp Ile Ala Ala Asn Glu
      20           25           30
Phe Leu Glu Tyr Gly Glu Phe Gln Gly Asn Tyr Tyr Gly Thr Ser Leu
      35           40           45
Glu Thr Val Arg Gln Val Ala Lys Gln Gly Lys Ile Cys Ile Leu Asp
      50           55           60
Val Glu Pro Gln Gly Val Lys Arg Leu Arg Thr Ala Glu Leu Ser Asn
      65           70           75           80
Pro Ile Val Val Phe Ile Ala Pro Pro Ser Leu Gln Glu Leu Glu Lys
      85           90           95
Arg Leu Glu Gly Arg Asn Lys Glu Ser Glu Glu Ser
      100           105

```

<220>
<223> consensus sequence

Asp 1	Ser	Tyr	Gln	Lys 5	Ser	Ser	Gly	Asn	Ser 10	Ser	Leu	Trp	Glu	Ser 15	Asn
Tyr	Gln	Asn	Trp 20	Gln	Gln	Glu	Ala 25	Ala	Lys	Leu	Lys	Ala	Gln 30	Ile	Glu
Asn	Leu	Gln	Asn 35	Asn	Arg	Asn	Gln 40	Arg	His	Leu	Leu	Gly 45	Glu	Asp	Leu
Gly	Ser 50	Leu	Ser	Leu	Lys	Glu 55	Leu	Gln	Gln	Leu	Glu 60	Gln	Gln	Leu	Glu
Lys 65	Gly	Leu	Lys	His 70	Ile	Arg	Ser	Arg	Lys 75	Asn	Gln	Leu	Leu	Leu	Asp 80
Gln	Ile	Glu	Glu 85	Leu	Gln	Lys	Lys	Glu	Arg 90	Glu	Leu	Gln	Glu	Glu 95	Asn
Lys	Ala	Leu	Arg 100	Lys	Lys	Ile	Glu	Glu 105							